

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1.- 66. (Cancelled).

67. (Currently amended) A composition of matter having the following formula:

IEM-PBM-[L]-[MS-MM]_p,

wherein p is 1;

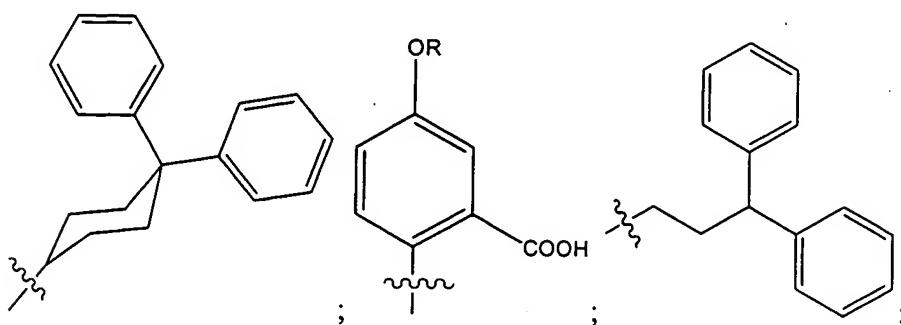
wherein L comprises a physiologically compatible linker moiety which links the PBM and [MS-MM] moieties;

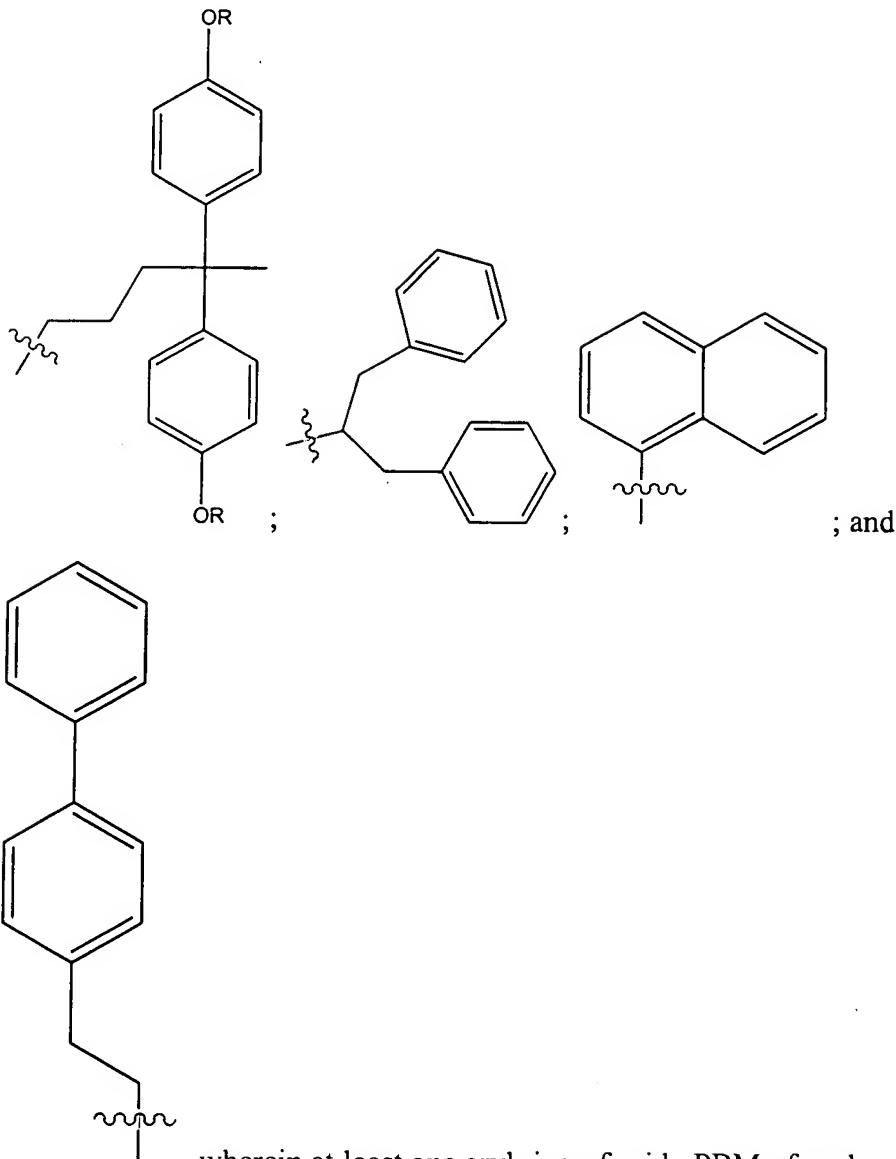
wherein said IEM comprises a complex between:

(1) a chelating agent selected from the group consisting of DTPA, DOTA, DTPA-BMA, and HP-DO3A, and

(2) one or more paramagnetic metal ions (M) with atomic numbers 21-29, 42, 44, or 57-83;

wherein said -PBM moiety is selected from the group consisting of:





, wherein at least one aryl ring of said -PBM of each member of the group is substituted with said $-[L]-[MS-MM]_p$ moiety;

wherein R can be a linear or branched alkyl aliphatic group having from 1 to 5 carbons, an aryl group, or a cycloalkyl group;

wherein the wavy line signifies the attachment site for the IEM;

wherein said -PBM moiety is conjugated to said IEM via a covalent bond to a methylene carbon of said chelating agent of said IEM;

wherein said MS moiety comprises is an amide bond;

Applicant : Randall B. Lauffer et al.
Serial No. : 10/758,729
Filed : January 16, 2004
Page : 4 of 14

Attorney's Docket No.: 13498-019003 / MET-
5/Continuation

wherein said MM moiety is a peptide comprising consisting of two or more or three positively charged amino acids;

and pharmaceutically acceptable salts thereof.

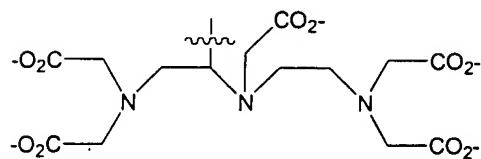
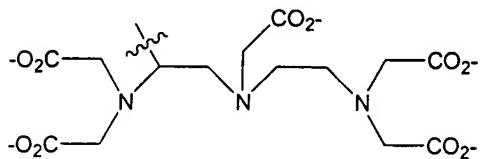
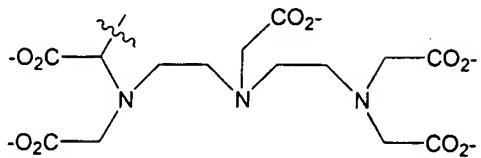
68. (Currently amended) The composition of claim 67, wherein said MM moiety is a peptide comprising consisting of two or more Arg, Lys, or tm-Lys amino acids, or mixtures thereof.

69. – 70. (Cancelled).

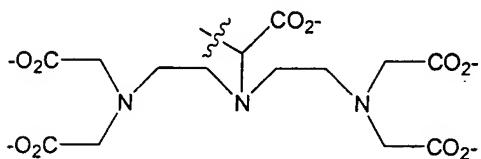
71. (Currently amended) The composition of claim 68 67, wherein said MM moiety is Arg-tmLys-tmLys.

72. (Currently amended) The composition of claim 68 67, wherein said MM moiety is Ile-Arg-Lys.

73. (Currently amended) The composition of claim 68 67, wherein said chelating agent is selected from the group consisting of:

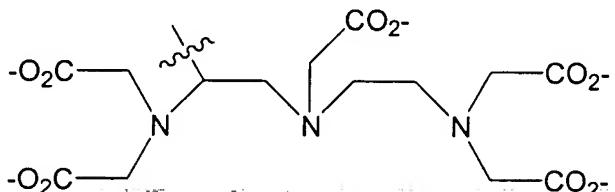


and



wherein the wavy line signifies the attachment site for the -PBM-L-MS-MM moiety.

74. (Currently amended) The composition of claim 68 67, wherein said chelating agent is



wherein the wavy line signifies the attachment site for the -PBM-L-MS-MM moiety.

75. (Previously presented) The composition of claim 67, wherein said paramagnetic metal ion is selected from the group consisting of:

- (a) Gd (III),
- (b) Mn (II),
- (c) Fe (III),

- (d) Cu (II),
- (e) Cr (III), and
- (f) Eu (III).

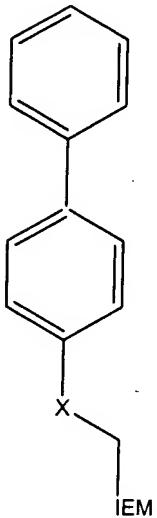
76. (Previously presented) The composition of claim 75, wherein said paramagnetic metal ion is Gd(III).

77. (Previously presented) The composition of claim 67, wherein the pharmaceutically acceptable salt is an N-methyl-D-glucamine, calcium, or sodium salt.

78. (Previously presented) The composition of claim 77, wherein the pharmaceutically acceptable salt is a sodium salt.

79. – 80. (Cancelled).

81. (Currently amended) A composition of matter having the following structure formula:
IEM-PBM-(MS-MM),



wherein said IEM comprises a complex between:

- (1) a chelating agent selected from the group consisting of DTPA, DOTA, DTPA-BMA, and HP-DO3A, and
- (2) one or more paramagnetic metal ions (M) with atomic numbers 21-29, 42, 44, or 57-83;

~~said composition having the structure:~~

wherein at least one aryl ring of said structure is substituted with said a L-[MS-MM]_p moiety, wherein p is one;

wherein X is CH₂, O, or NH;

wherein L comprises a physiologically compatible linker moiety which links said one substituted aryl ring with said -[MS-MM]_p moiety;

wherein said MS moiety comprises is an amide bond;

wherein said MM moiety is a peptide comprising consisting of two or more or three positively charged amino acids;

and pharmaceutically acceptable salts thereof.

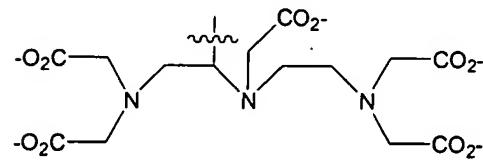
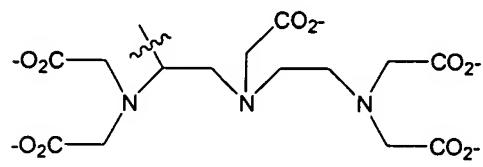
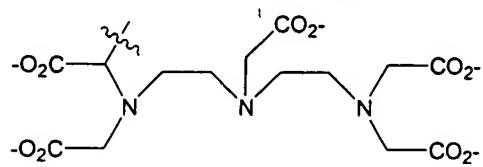
82. (Currently amended) The composition of claim 81, wherein said MM moiety is a peptide comprising consisting of two or more Arg, Lys, or tm-Lys amino acids, or mixtures thereof.

83. – 84. (Cancelled).

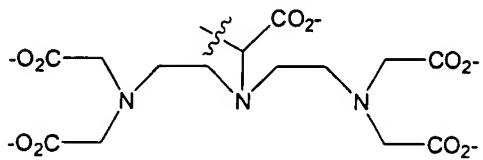
85. (Currently amended) The composition of claim 82 81, wherein said MM moiety is -Arg-tmLys-tmLys.

86. (Currently amended) The composition of claim 82 81, wherein said MM moiety is Ile-Arg-Lys.

87. (Currently amended) The composition of claim 81, wherein said chelating agent is selected from the group consisting of:

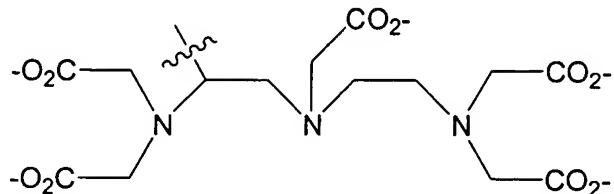


and



wherein the wavy line signifies the attachment site for the PBM-MS-MM moiety.

88. (Currently amended) The composition of claim 87, wherein said chelating agent is



~~wherein the wavy line signifies the attachment site for the PBM-MS-MM moiety.~~

89. (Previously presented) The composition of claim 81, wherein said paramagnetic metal ion is selected from the group consisting of:

- (a) Gd (III),
- (b) Mn (II),
- (c) Fe (III),
- (d) Cu (II),
- (e) Cr (III), and
- (f) Eu (III).

90. (Previously presented) The composition of claim 89, wherein said paramagnetic metal ion is Gd(III).

91. (Previously presented) The composition of claim 81, wherein the pharmaceutically acceptable salt is an N-methyl-D-glucamine, calcium, or sodium salt.

92. (Previously presented) The composition of claim 91, wherein said pharmaceutically acceptable salt is a sodium salt.

93. – 94. (Cancelled).

95. (Currently amended) A method for magnetic resonance imaging, said method comprising:

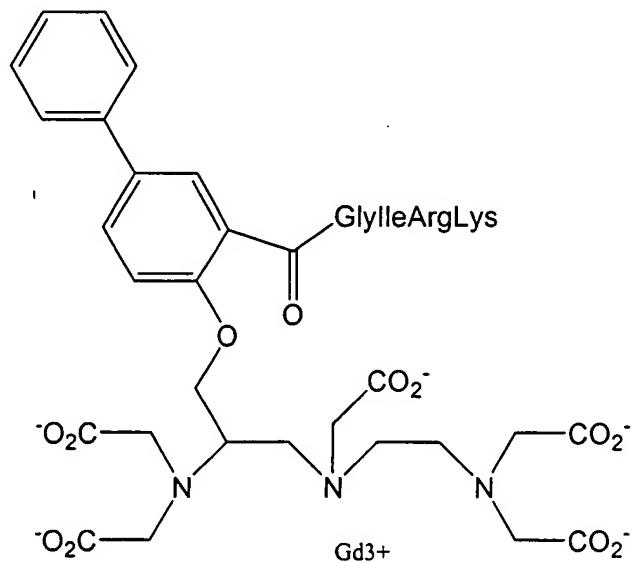
a) administering to a mammal the composition of matter of claim 67 or 81,

b) allowing the composition of matter to be bioactivated;

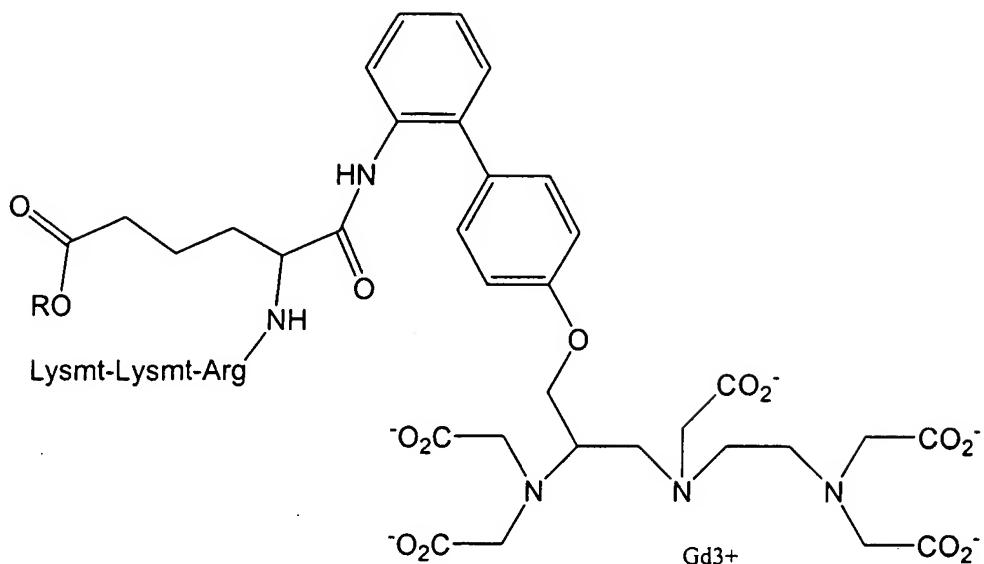
c) allowing said bioactivated composition of matter to bind to a protein on the extracellular surface of a tissue or in extracellular fluid surrounding a tissue, said tissue containing a bioactivity to be detected; and

d) subjecting said mammal to magnetic resonance imaging.

96. (Currently amended) ~~The A compound according to claim 81 having the structure of Prodrug Compound 2:~~



or Prodrug Compound 10:



~~as set forth in the specification.~~

97. (New) The composition of claim 67 or 81, wherein said L moiety is a peptoid linkage.

98. (New) The composition of claim 67 or 81, wherein said L moiety has the following structure:

